

TAUHMANN, A.B.

with a fast and lasting dust elimination. The
agent is applied to water with various wetting
agents. It is a fast formation of the pure wetting
agent on the surface of the water, thus forming a
protective contact between the solid and wetting agent, and
the water. N. Vasileff

dm
mt

Taubman, A.B.

20-1-30/44

AUTHORS: Nikitina, S.A., Taubman, A.B.

TITLE: The Role of Adsorption Kinetics in the Effects of Wetting of Dust Particles by Drops of Solutions of Surface Active Substances (O roli kinetiki adsorptsii v yavleniyakh smachivaniya chas-tits pyli kaplyami rastvorov poverkhnostno-aktivnykh veshchestv)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 1, pp. 113 - 116 (USSR)

ABSTRACT: When investigating the dust adsorbing effect of the aqueous solutions of surface active substances of semicolloidal type (e.g. the wetting substances ДБ and ОТ-10) the authors found considerable differences in their dust-adsorbing capacity, although these substances were of similar chemical composition and molecular structure. These differences were found also in such solutions in which a practically equal extremely reduced static surface tension (up to 30 - 35 erg/cm²) exists. The reduction of the static surface tension of the solution of surface active substances does not characterize the true properties in the case of the real conditions of dust adsorption. The dynamic value σ_d of surface tension may assume values that range nearly from the surface tension of pure water (σ_0) up

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The Role of Adsorption Kinetics in the Effects of Wetting of Dust Particles by Drops of Solutions of Surface Active Substances

to the lowest value σ_s . Perhaps these differences, which are due to the special properties of the solutions of the colloidal wetting agents can be explained by investigating the surface activity of these wetting agents in the case of different durations of the existence of the interface solution-air. In the solutions of ДБ and the aerosol ОТ the kinetics of the attainment of adsorption equilibrium manifests itself comparatively quickly, and both isotherms (of dynamic and static surface tension) approach each other rapidly with increasing concentration. At a certain value they are even identical. In the case of the wetting agent ОТ-10 the difference between σ_d and σ_s is considerable and does not vanish (which is of essential importance) in the case of larger concentrations. In the solutions of those wetting agents in which the forming of micells occurs at a certain point of approximation of the isotherms $\sigma_d(C)$ and $\sigma_s(C)$, the efficacy of the collision of the dust particles with the drops of the solutions will be greatest at kinetic conditions. The greatest effect is attained by the wetting agents ДБ and ОТ. There are 3 figures and 8 references, 4 of which are Slavic.

Card 2/3

20-1-30/44

The Role of Adsorption Kinetics in the Effects of Wetting of Dust Particles
by Drops of Solutions of Surface Active Substances

ASSOCIATION: Department for Dispersive Systems of the Institute for Physical
Chemistry AN USSR
(Otdel dispersnykh sistem Instituta fizicheskoy khimii Akademii
nauk SSSR)

PRESENTED: April 13, 1957, by P.A. Rebinder, Academician

SUBMITTED: April 4, 1957

AVAILABLE: Library of Congress

Card 3/3

TAUBMAN, A. B. and YANOVA, L. P.

"The Role of Gas-formation in the Disintegration of Polymers by Radiation"

p. 292

Truly Transactions of the First Conference on Radioaction Chemistry, Moscow,
Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow

SOV/81-59-16-59581

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 16, pp 556-557

AUTHORS: Taubman, A.B., Yanova, L.P.

TITLE: The Investigation of Radiation Resistance of High Polymers I. The Effect of Radiation on the Diffusion Permeability

PERIODICAL: V sb.: Deystviye ioniziruyushchikh izlucheniya na neorgan. i organ. sistemy. Moscow, AN SSSR, 1958, pp 307-313

ABSTRACT: The diffusion permeability (DP) in relation to HCl of polytetrafluoroethylene (I), polyethylene (II), polymethylmethacrylate (III), polystyrene (IV) and polyvinylchloride (V), which had been irradiated by X-rays and electrons, has been investigated. The determinations were conducted by means of measuring the leakage of the gas through a film of the polymer which separated two chambers, one of which contained a 35.5% solution of HCl in water and the other water. The quantity of HCl was determined by electric conductivity. It has been established that amorphous III and V in the glass-like state have a low DP which increases slowly in III and rapidly in V during irradiation. Such a behavior is explained by the dense packing of the molecules and the radiation instability which leads

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SOV/81-59-16-59581

The Investigation of Radiation Resistance of High Polymers. I. The Effect of Radiation on the Diffusion Permeability

to the intensive liberation of gases and gives rise to the origination of micro-defects in the material. IV in the glass-like state is characterized by a high DP due to the looseness of the packing. Radiation slightly affects the DP of IV. A high DP and its small variations due to irradiation are characteristic also for II. On the basis of the obtained data the coefficients of permeability and diffusion of II and V for HCl have been calculated.

Yu. Lipatov.

Card 2/2

66387

SOV/58-59-10-22522

5.3831

Translation from: Referativnyy Zhurnal, Fizika, 1959, Nr 10, p 106 (USSR)

AUTHORS: Yanova, L.P., Taubman, A.B.

TITLE: Study of Radioresistance in High Polymers. II. On the Role of Gas Formation During Degradation of Polymers

PERIODICAL: In the Symposium: The Effect of Ionizing Radiation on Inorganic and Organic Systems. Moscow, AS USSR, 1958, pp 314 - 324

ABSTRACT: The authors investigated the role played by processes of gas formation in the mechanism of degradation of polymers (teflon, polymethyl methacrylate, and polyethylene) under the action of electron irradiation. It is shown that the intensity of the process of formation of gaseous degradation products increases with a sharp jump in the narrow temperature region where the polymers melt or effect a transition to a viscous-flowing state. It is pointed out that degradation should be considered a reversible process: degradation \rightleftharpoons recombination of free radicals. The equilibrium of this process shifts toward the left upon the transition of the polymer to the flowing state. It was established that the temperature increase of the polymer sample irradiated with fast

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66387

80V/58-59-10-22522

Study of Radioresistance in High Polymers. II. On the Role of Gas Formation During Degradation of Polymers

electrons can in a number of cases induce a melting of the material in the zone of maximum absorption of electron energy and thereby substantially alter the intensity of the processes of degradation and gas formation. It is shown that the character of the change in the mechanical properties of polymers and, in the final analysis, their degradation, is not directly dependent on the amount of gaseous products of decay that are being formed, but rather is determined by the ratio of the speed of this process to that of the process of liberation of gases from the irradiated sample and consequently depends on the gas permeability of the polymer. The authors discuss the mechanism of crack formation in polymers under the action of irradiation and show that this phenomenon is connected with the formation of gases and the conditions of their liberation from the material. (In-t fiz. khimii AS USSR). Part I cf. RZhFiz., 1959, Nr 8, 17756.

The authors' résumé

Card 2/2

SOV/58-59-8-17759

Translated from: Referativnyy Zhurnal Fizika, 1959; Nr 8, p 112 (USSR)

AUTHORS: Kargin, V.A., Taubman, A.B., Yanova, L.P., Belyayeva, Z.F.

TITLE: The Effect of Ionizing Radiation on the Properties of the Copolymers of Vinyl Chloride and Vinylidene Chloride

PERIODICAL: V sb.: Deystviye ioniziruyushchikh izlucheniy na neorgan. i organ. sistemy. Moscow, AN SSSR, 1958, pp. 325-332

ABSTRACT: The effect of radiation on the gas-permeability and mechanical properties of the copolymers of vinyl chloride and vinylidene chloride is investigated, and it is shown that the variations of these properties are closely connected with the variation during irradiation of the mixed amorphous-crystalline state of the copolymers and their microstructure. The presence in the copolymers of a crystallizing component which heightens micro-defectiveness, causes an augmentation of their gas-permeability in proportion to the increase in the content of this component. Irradiation also leads to an intensification of gas-permeability, but the melting of the crystalline component which it causes and the disorganization of the material in a certain region of small doses, can lead to the opposite

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SOV/58-59-8-17759

The Effect of Ionizing Radiation on the Properties of the Copolymers of Vinyl Chloride and Vinylidene Chloride

effect. In conformity with this, the curves of the coefficient of permeability versus the dose have two extrema: a minimum and a maximum. The disorganization of the material also shows up abruptly in the elastic properties of the copolymers: after irradiation the typical diagrams of stretching, consisting of two linear sections, the second of which is horizontal, are superseded by the S-shaped curves characteristic of amorphous materials. Full conformity is established between the character of the variations of the gas-permeability of copolymers and their mechanical properties under the influence of radiation. (In-t fiz. khimii AN SSSR).

The author's résumé

Card 2/2

AUTHORS: Taubman, A.B., Burshteyn, S.I. SOV-69-20-5-3/23

TITLE: Some Specific Features in the Adsorption of Surface-Active Substances From Non-Aqueous Solutions (O nekotorykh osobennostyakh adsorbtsii poverkhnostno-aktivnykh veshchestv v nevodnykh sredakh)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 5, pp 539-545 (USSR)

ABSTRACT: In the article, various facts which permit the formulation of some important laws of adsorption from non-aqueous solutions are considered. Formamide is especially useful for the investigation of the adsorption laws, because it has very pronounced polar properties (dielectric constant = 84, dipole moment = 3.2) and a relatively high surface tension. In Figure 1, the surface tension isotherms of alcohols, acids, and amines dissolved in formamide are shown. It is evident that the adsorption capacity of these compounds increases sharply in homological series. In formamide, solvation appears only on the liquid-vapor interface in the relation of the polar groups of the dissolved molecules which effect the interaction with the solvent by means of the hydrogen bonds. The adsorption from a non-polar hydrocarbon medium leads to the formation of adsorption layers only on the interface of

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SOV-69-20-5-3/23

Some Specific Features in the Adsorption of Surface-Active Substances From Non-Aqueous Solutions

the hydrocarbon and the polar liquids. Figure 2 shows that the surface activity of molecules of diphilic structure is determined by the adsorption of the polar groups, not of the hydrocarbon chains. The influence of the chain length is negligible. The different groups may be arranged in the following series according to adsorption capacity: $\text{OH} \geq \text{COOH} \geq \text{NH}_2 \geq \text{COOR} > \text{J} = \text{Cl}$. The adsorption work, e.g. in

the adsorption of the carboxyl group from octane, amounts to 2,500 kcal/mole. The differences in the polar properties of the solvent affect the adsorption capacity of the surface-active molecules. Figure 4 shows that at the transition from the not-easily polarizing octane and cyclohexane to the easily polarizing benzene, the adsorption capacity drops sharply. The solvation of the hydrocarbon chains by the solvent transforms them into gases and excludes the pos-

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SOV-69-20-5-3/23

Some Specific Features in the Adsorption of Surface-Active Substances From Non-Aqueous Solutions

sibility of the formation of condensed adsorption layers on the interface of two liquids. There are 4 graphs, 1 table, and 12 references, 8 of which are Soviet and 4 English.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Otdel dispersnykh sistem (Institute of Physical Chemistry of the USSR Academy of Sciences, Department of Dispersed Systems). Odesskiy universitet im. Mechnikova (Odessa University imeni Mechnikov)

SUBMITTED: June 2, 1958

1. Adsorbents--Analysis 2. Solutions--Properties 3. Amides
--Applications

Card 3/3

AUTHORS: Taubman, A.B., Koretskiy, A.F. SOV-69-20-5-22/23

TITLE: The Role of the Mechanical Strength of the Stabilizing Layer in the Stability of Emulsions (O roli strukturno-mekhanicheskogo faktora v ustoychivosti emul'siy)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 5, pp 676-677 (USSR)

ABSTRACT: The stabilizing action of bentonite clay on emulsions of hydrocarbons in water is here investigated. Stable emulsions could be obtained only by means of one-particle layers in the presence of adsorption layers of metallic soaps. The stabilization of emulsions by hydrophobic aluminum soaps takes place in the presence of the solid colloidal phase. A chemical adsorption layer developing under these conditions prevents the emulsion droplets from coalescing. There is 1 graph and 2 references, 1 of which is Soviet and 1 English.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Otdel dispersnykh sistem, Moskva (Institute of Physical Chemistry of the USSR Academy of Sciences, Department of Dispersed Systems, Moscow)

SUBMITTED: June 15, 1958

1. Metallic soaps--Properties 2. Clays--Performance 3. Hydrocarbons--Stability

Card 1/1

AUTHOR: Taubman, A.B.

SOV-69-20-5-23/23

TITLE: The Fourth All-Union Conference on Colloidal Chemistry (Chet-
vertaya vsesoyuznaya konferentsiya po kolloidnoy khimii)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 5, pp 677-679 (USSR)

ABSTRACT: The Fourth All-Union Conference on Colloidal Chemistry took place in Tbilisi from May 12-16, 1958. More than 150 papers were presented. A.V. Dumanskiy read a paper on the history of colloidal-chemical investigations in the USSR. The conference heard the following reports: V.A. Kargin, V.N. Tavetkov, S.M. Lipatov, on polymers, their solutions and semi-colloids; A.I. Yurzhenko, P.M. Khomikovskiy, on the mechanism of emulsion polymerization; B.A. Dogadkin, on the production and the properties of the interpolymer of natural and butadienestyrene rubber; P.I. Zubov, on the mechanism of the formation of polymer films in gluing processes; S.S. Voyutskiy and D.M. Sandomirskiy, on colloid properties of latex systems; A.S. Kuz'minskiy and A.P. Pisarenko, on the properties of rubber and resin solutions; V.A. Pchelin, on the structural-mechanical properties of gelatine gels; N.A. Demchenko, on solubilization in soap solutions; A.V. Dumanskiy, on new methods for investigating the structures of

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. The Fourth All-Union Conference on Colloidal Chemistry SOV-69-20-5-23/23

soaps and gels; P.A. Rebinder and his school on structure formation in solidification processes of binding materials; A.A. Trapeznikov, S.S. Voyutskiy, B.Ya. Yampol'skiy, G.V. Vinogradov, on problems of rheology and structure formation in oleophilic systems; L.A. Kozarovitskiy on the mechanism of the printing process and the influence of the rheological properties of printing dyes; I.N. Vlodavets, P.A. Rebinder on the process of structure formation in food stuffs; V.I. Likhtman, G.M. Bartenev, Ye.D. Shchukin, P.A. Rebinder, on deformation processes, the rheological conduct and the destruction of solids and metals; P.A. Tissen (GDR), on the surface dispersion of solid bodies; Linde (GDR), on the influence of surface layers on the kinetics of heterogeneous processes of diffusion exchange; M.Ye. Shishniashvili, M.P. Vol'arovich, N.N. Serb-Serbina, N.Ya. Denisov, Z.Ya. Berestneva, A.S. Korzhuyev, S.P. Nichiporenko, G.V. Kukoleva, F.D. Ovcharenko, I.N. Antipov-Karatayev, on structure formation in the colloidal chemistry of clays and peat; B.V. Deryagin, on the interaction of twisted metal threads in solutions of electrolytes; A.D. Sheludko, M.B. Radvinskiy, on the resistance of free films and foams; S.V. Nerpin, on the hydromechanics and thermodynamics of thin films and their influence on soil properties; S.Yu. Yelovich, on catalytic processes

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SOV-69-20-5-23/23

The Fourth All-Union Conference on Colloidal Chemistry

in foams; Yu. M. Glazman, on the first mathematical theory of ion antagonism; O.N. Grigorov, D.A. Fridrikhsberg, S.G. Teletov, on the electrokinetic properties of colloids in connection with their coagulation by electrolytes; Ye.M. Napobashvili on radiation colloidal chemistry; B.A. Bogadkin, on the chemical sorption of sulfur and rubber on carbon black; S.G. Mokrushin, on the formation of thin colloidal films, N.A. Krotova, on the influence of an electrical field on the dispersion of a liquid; E.M. Natanson, V.G. Levich, L.Ya. Kremnev, A.B. Taubman, on the resistance of emulsions and suspensions in connection with the stabilizing action of structure-mechanical properties of protective surface layers; P.S. Prokhorov, B.V. Deryagin, G.I. Izmaylova, S.S. Dukhin, on the adsorption of vapors by condensation nuclei and their influence on the formation of water aerosols; P.I. Kaishev, O.M. Todes, on the kinetics of formation and destruction of aerosols; A.B. Taubman, on the kinetic wetting in the process of collecting dust by use

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SOV-69-20-5-23/23

The Fourth All-Union Conference on Colloidal Chemistry

of solutions of surface-active substances; A.N. Frumkin, M.M. Dubinin, B.P. Bering, V.V. Serpinskiy, V.M. Luk'yanovich, L.V. Radushkevich, G.V. Tsitsishvili, N.F. Yermolenko, on the adsorption from vapors and liquids.

1. Chemistry--USSR
2. Colloids--Chemical properties

Card 4/4

W3COM-DC-55808

NIKITINA, S.A.; TAUBMAN, A.B.

Apparatus for gauging the dust recovery properties of aqueous solutions of wetting agents. Gig. i san. 23 no.12:71-74 D '58. (MIRA 12:1)

1. Iz Instituta fizicheskoy khimii AN SSSR.

(DUST

dust recovery properties of aqueous solutions, appar.
for evaluation (Rus))

SOV/76-32-10-39/39

5(4)0

AUTHOR:

Taubman , A. B.

TITLE:

Petr Aleksandrovich Rebinder (Petr Aleksandrovich Rebinder)
(On His 60th Birthday Anniversary)(k 60-letiyu so dnya
rozhdeniya)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 10,
pp 2467 - 2469 (USSR)

ABSTRACT:

On October 3, a.c. P.A.Rebinder, Member, Academy of
Sciences, USSR, reached his 60th birthday. In his
35 years of activity in the field of physical and
colloid chemistry together with his collaborators he
introduced the concept of physical chemical mechanics.
Fapers (with their titles) by P.A.Rebinder as well as
the names of his collaborators in these papers are given.
Among them are the following scientists: A.B.Taubman ,
K.F.Zhigach, N.N.Petrova, N.N.Serb-Serbina, M.Ye.Lipets,
M.M.Rimskaya, N.M.Lubman, A.N.Frumkin, V.B.Margaritov,
A.P.Pisarenko, L.A.Kozarovitskiy, Ye.K.Venstr, A.M.
Smirnova, A.A.Trapeznikov, N.A.Figurovskiy, K.A.Pospelova,

Card 1/2

Petr Aleksandrovich Rebinder (On His 60th Birthday
Anniversary)

SOV/76-32-10-39/39

Z.N.Markina, V.I.Likhtman, G.I.Loginov, M.S.Aslanova,
L.A.Shreyner, S.Ya.Veyler, G.V.Karpenko, G.I.Yepifanov,
N.A.Pleteneva, Ye.Ye.Segalova, L.A.Abduragimova, N.V.
Mikhaylov, I.M.Gor'kova, N.Ya.Denisov. 18 Doctors of
Sciences and 50 Candidates took their degrees at the
Kollektiv under the supervision of P.A.Rebinder at the
Institut fizicheskoy khimii Akademii nauk SSSR (In-
stitute of Physical Chemistry AS USSR) and the kafedra
kolloidnoy khimii Moskovskogo gosudarstvennogo uni-
versiteta (Chair of Colloid Chemistry of Moscow State
University). P.A.Rebinder together with his collaborators
published 300 scientific papers and 50 monographies.
Rebinder is a winner of the Stalin Prize and was
awarded the Order of Lenin, the Red Order of Labour
and the Order of the Patriotic War, First Class, With
Medals.

Card 2/2

USCOMM-DC_60,857

AUTHOR: Taubman, A.B., Doctor of Chemical Sciences 26-58-5-57/57

TITLE: Is It Possible to Produce an Inexplosive Mixture of Hydrogen and Oxygen (Mozhno li sozdat' nevzryvayushchuyusya smes' vodoroda s kislorodom)

PERIODICAL: Priroda, 1958, Nr 5, p 128 (USSR)

ABSTRACT: The author roughly explains the practical method of Tanaka and Nagai in 1927. He points out that the theory of the increasing stability of explosives by introducing special substances (flagmatization) has been worked out chiefly by Soviet scientists.

AVAILABLE: Library of Congress

Card 1/1 1. Hydrogen - Oxygen - Stability

AUTHORS: Taubman , A. B., Yanova, L. P.

20-118-5-40/59

TITLE: On Some Characteristic Features in the Radiation
Decomposition of Polymers (O nekotorykh osobennostyakh
radiatsionnoy destruktzii polimerov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5,
pp. 991-993 (USSR)

ABSTRACT: In the decomposition (depolymerization) caused by high-energy radiation highly supersaturated gases form, which cause high interior stresses within the material and therewith accelerate its destruction. It is difficult to determine directly the relationship between the radiation strength and the quantity of gas liberated by irradiation. This fact does not depend on the low influence of the formation of gas upon the destruction, but on the complicated character of the radiolytic processes. Some peculiar features of these processes can be observed at an simultaneous influence of radiation and increases temperature upon the polymers. Therefore the present work investigates the formation of gas and its influence upon the destruction

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On Some Characteristic Features in the Radiation Decomposition of Polymers

20-118-5-40/59

of polytetrafluoro ethylene, polymethylmetacrylate and polyethylene by irradiating them with a beam of fast electrons at different temperatures. The samples were electrically heated within a special bulb and irradiated as well. The dosage rate of the beam produced by an accelerator amounts to $E \sim 2 \cdot 10^{17} - 4 \cdot 10^{19}$ eV/cm³.sec. In polytetrafluoroethylene the intensity of formation of gas in a wide temperature interval is very low; it only amounts to a few hundredth of one per cent, and even at 250°C it does not exceed 0,5 %. However, within the range near the melting point ($\sim 330-350^\circ\text{C}$) the formation of gas increases to such an extent that at an equally high dosage the irradiated sample losses about half of its weight. By irradiating the sample somewhat longer it completely transforms into gaseous products. Then a short report is given on the phenomena occurring in the irradiation of the other above mentioned substances. The general character of these phenomena obviously speaks for the reversibility of radiolytic reactions, which are caused by the formation of gaseous products. The rapid liberation

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On Some Characteristic Features in the Radiation Decomposition of Polymers

20-118-5-40/59

of destruction products from the range of reaction displaces the equilibrium of the reversible process of destruction \rightleftharpoons recombination to the left, and therefore with much increases the velocity of the radiolytic processes. In the phenomena discussed here the principle of the equivalence of the effect of different dosages independent from the dosage rate is not valid any longer. The formation of ligneous fissures in the irradiation with electrons also can be explained by the reversible character of the process. By the liberation of gases a state of stress is formed within the material; the therefrom resulting fissures decrease the supersaturation of solutions and lead to the liberation of the simultaneously forming excess gas.

There are 2 figures and 4 references, 3 of which are Soviet

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On Some Characteristic Features in the Radiation Decomposition of Polymers

20-118-5-40/59

ASSOCIATION: Otdel dispersnykh sistem Instituta fizicheskoy khimii
Akademii nauk SSSR
(Department for Disperse Systems of the Institute for
Physical Chemistry of the AS USSR)

PRESENTED: July 10, 1957, by V. A. Kargin, Member, Academy of
Sciences, USSR

SUBMITTED: July 6, 1957

Card 4/4

30V/ 20-120-1-34/63

AUTHORS: Taubman, A. B., Koretskiy, A. F.

TITLE: On the Mechanism of the Emulsifying Action of Solid Emulsifiers
(O mekhanizme emulgiruyushchego deystviya tverdykh emulgatorov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 1,
pp. 126 - 129 (USSR)

ABSTRACT: First the authors mention various papers dealing with the same subject. The experiments carried out in earlier papers permit the explanation of the character of the activation of bentonite by the addition of electrolytes (FeCl_3 , $\text{Al}_2(\text{SO}_4)_3$ etc) as well as the physical and chemical foundation of the method of the emulsification of mineral oil products by means of solid emulsifiers. The authors determined the stability of emulsions produced by a thorough mechanic shaking, as well as the structural and mechanic properties of the layers between the phases as function of the content of the solid emulsifier at a constant ratio of the volumes of the liquid phases (water: oil - 1:1). Vaseline oil and carbon tetrachloride served as experimental substances. These substances had been carefully purified. The experiments are described in short. The results of the measurements show,

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On the Mechanism of the Emulsifying Action of Solid 30V/ 20-120-1-34/63
Emulsifiers

among others, the following: Stable emulsions can be obtained with pure vaseline oil only in the case of a relatively high concentration (4%) in the aqueous bentonite medium, which corresponds to the coagulation structure already formed in the entire volume. With decreasing concentration of the emulsifier the stability of the emulsion decreases rapidly so that rather thick layers cannot form any stable emulsions. The introduction of oleic acid into the oil considerably changes the conditions of emulsification as sodium oleate forms on the surface of the drops. The influence of such a change of the properties of the solid surface becomes noticeable to a different degree depending on the content of bentonite. Stable emulsions of oils can be obtained only on the following conditions: Bentonite is produced in the aqueous phase with volume-like coagulation structure only when structurized metal soaps of basic character are formed in the surface layer - and only on this condition it stabilizes the one-particle layer of the solid emulsifier. The author thanks P.A.Rebinder, Member, Academy of Sciences, USSR, for his interest in this paper as well as for his valuable contributions.

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On the Mechanism of the Emulsifying Action of Solid Emulsifiers SOV/20-120-1-34/63

There are 2 figures and 7 references, 5 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry AS USSR)

PRESENTED: December 30, 1957, by P.A.Rebinder, Member, Academy of Sciences, USSR

SUBMITTED: December 26, 1957

1. Mixtures--Properties 2. Oils--Properties 3. Metallic soaps
--Structural analysis

Card 3/3

TAUBMAN, A. B. and KORETSKIY, A. F.

"The Role of the Structuro-Mechanical Properties of Adsorbed Layers in the
Stabilizing Action of Solid Emulsifiers."

report presented at the Section on Colloid Chemistry, VIII Mendeleyev Conference of
General and Applied Chemistry, Moscow, 16-23 March 1959.
(Koll. Zhur. v. 21, No. 4, pp. 509-511)

LAUBMAN, A. B. and NIKITINA, S. A.

"The Kinetic Factor in Adsorption and Wetting Phenomena."

report presented at the Section on Colloid Chemistry, VIII Mendeleev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959.
(Koll. Zhur. v. 21, No. 4, pp. 509-511)

NIKITINA, S.A., kand.khim.nauk; ~~TAUBMAN, A.B., doktor khim.nauk~~; ZAKIYEVA, S.Fn.,
kand.khim.nauk

Physical and chemical principles of the dust-collecting action
of surface active agents. Bor'ba s sil. 3:29-39 '59.

(HIRA 12:9)

(SURFACE ACTIVE AGENTS)

(DUST--REMOVAL)

5(4)

SOV/69-21-4-21/22

AUTHOR: Taubman, A. B.

TITLE: Book Review

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol XXI, Nr 4, pp 507-508 (USSR)

ABSTRACT: This is a review of the book "Kolloidnaya khimiya (Uchebnoye posobiye dlya studentov tovarovednogo i tekhnologicheskogo fakul'tetov)" "Colloid Chemistry (Text-book for Students of the Faculties of Staple Commodities and Technology)" by A.P. Pisarenko, K.A. Fomelova and A.G. Yakovlev, published by the Institut sov. trgovli (Institute of Soviet Trade) in 1956 (245 pages).

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SOV/80-32-4-15/47

5(4)

AUTHORS: Zakriyeva, S.Kh., Taubman, A.B.

TITLE: Investigation of the Dust Collecting Capacity of Solutions of Wetting Agents in the Dust Chamber (Issledovaniye pyleu-lavlivayushchey sposobnosti rastvorov smachivateley v pylevoy kamere)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 797-800 (USSR)

ABSTRACT: Water is widely used in mining operations for reducing the concentration of quartz or coal dust. Special wetting reagents are added to water to increase its dust collecting capacity. The purpose of the present investigation was to test several wetting agents in a laboratory dust chamber of 1 m³ in volume. The chamber is illustrated by Figure 1 and described. A special method was developed which consisted in determining the dust collecting capacity of water and wetting agent solutions by the muddiness of suspensions which were formed by the dust collected in the process of liquid spraying. It was found that the new synthetic wetting agent PAC-Na, prepared in the Institut nefi AN SSSR

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SOV/80-32-4-15/47

Investigation of the Dust Collecting Capacity of Solutions of Wetting Agents
in the Dust Chamber

(Petroleum Institute of the AS USSR), effectively raises the dust collecting capacity of water. The results of experiments are shown in Graphs 2 and 3 and in Table. The muddiness of the suspensions was measured by a nephelometer of the NMF-type. Acknowledgement to A.Ya.Larin is expressed for the supply of wetting agent samples. There are 1 diagram, 2 graphs, 1 table and 9 Soviet references.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry of the AS USSR)

SUBMITTED: December 31, 1957.

Card 2/2

SOV/20-124-2-33/71

5(4)

AUTHORS:

Koretskiy, A. P., Taubman, A. B.

TITLE:

On the Emulsifying Effect of Highly Dispersive Solids (Ob emul'giruyushchem deystvii vysokodispersnykh tverdykh tel)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2, pp 358-361 (USSR)

ABSTRACT:

The stability of the emulsion was estimated on the basis of that time which is necessary for the partial destruction of the emulsion and for a separation of half of the emulsified oil in a free form. Such emulsions were considered to be stable as were not destroyed within two days. The highly dispersive particles with different dispersive nature form stable emulsions at very different concentrations of the solid phase. Infinitesimally small impurities of acid character which frequently cannot be detected at all by means of analysis (and which always exist even in purified hydrocarbon-oil) suffice for the purpose of forming a hydrophobe chemoadsorption coating on the surface of the CaCO_3 -particles which reacts easily with these particles. This coating is an adsorption layer of

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On the Emulsifying Effect of Highly Dispersive Solids SOV/20-124-2-33/71

Ca-oil which is necessary for structural formation. The dependence of the emulsifying effect on the hydrophobe and especially introduced additions, which is shown by a diagram, confirms what has just been said. At no concentrations of oleic acid does SiO_2 acquire the capacity of emulsifying, but TiO_2 does. By the consolidation of the particles of the emulsifier which have been rendered as hydrophobic as possible, it is possible considerably to reduce the solid phase content necessary in transition from a loose multi-layer coating to a diluted but already structured protective coating. Rendering hydrophobic of the emulsifier particles exercises a similar influence also upon calcium carbonate. The high degree of stabilization necessary for the production of stable, long-duration emulsions with small quantities of solid, hydrophile emulsifiers can be attained only by considerably strengthening the natural and not sharply marked mosaic structure of the surface of the crystal lattice of the respective particles. There are 2 figures and 10 references, 7 of which are Soviet.

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On the Emulsifying Effect of Highly Dispersive Solids SOV/20-124-2-33/71

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute for
Physical Chemistry of the Academy of Sciences, USSR)

PRESENTED: August 27, 1958, by P. A. Rebinder, Academician

SUBMITTED: August 27, 1958

Card 3/3

5(4)
AUTHORS: Belugina, G. V., Zakiyeva, S. Kh., SOV/20-126-2-25/64
Rebinder, P. A., Academician, Taubman, A. B.

TITLE: On the Stability and Viscosity of Concentrated
Suspensions in the Oleogels of Metallic Soaps
(Ob ustoychivosti i vyazkosti kontsentrirrovannykh
suspensiy v oleogelyakh metallicheskih myl)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 2,
pp 318-321 (USSR)

ABSTRACT: In the course of the investigations discussed in the present
paper the aluminum soaps of naphthenic acids were used as
structure-forming additions. They form oleogels with peculiar
structurally mechanical properties. These properties of
oleogels depend on the molecular nature of the dispersive
medium and may be regulated by variation of these factors.
In this connection, the authors investigated the time-
dependence of the viscosity of the gels of aluminum
naphthenate in hydrocarbon media and in concentrated
suspensions which are built up on the basis of such hydrocarbon
media. Ordinary technical surface-hardened oxidized aluminum
powder with particles of aluminum powder from 6 to 13 μ served

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On the Stability and Viscosity of Concentrated
Suspensions in the Oleogels of Metallic Soaps

SOV/20-126-2-25/64

as dispersive phase. The dispersion medium used was the purified basic paraffin-naphthene fraction of the fuel T - 1. The production of the aluminum soaps used for structure-formation is briefly described. A diagram shows the typical curves $\lg \eta - \tau$ for a 2% aluminum-naphthenate-gel. Here η denotes viscosity and τ - time. The introduction of a solid phase increases initial viscosity considerably, but without changing the character of its aging. Analogous curves of aging are given for 2% and 4%-gels of an aluminum-naphthenate of other composition. If benzene is substituted for the paraffin-naphthene fraction, the initial viscosity of the gel is reduced, but the viscosity of the gel in the suspension undergoes practically no change for the duration of one month. The decrease of viscosity in the oleogels of the aluminum-naphthenate and in the corresponding suspensions is probably a consequence of the latent formation of aggregates. There are 2 figures, 1 table, and 10 references, 9 of which are Soviet.

Card 2/3

On the Stability and Viscosity of Concentrated
Suspensions in the Oleogels of Metallic Soaps

SOV/20-126-2-25/64

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR
(Institute for Physical Chemistry of the Academy of
Sciences, USSR)

SUBMITTED: February 26, 1959

Card 3/3

BERKOVICH, Malka Tuv'yevna; BUKHMAN, Yakov Zakharovich; TAUBMAN, A.B.,
prof., doktor khim.nauk, retsenzent; GERVAS'YEV, A.M., kand.
tekhn.nauk, retsenzent; D'YAKOV, V.V., gornyy inzh., retsenzent;
BAKIROV, U.Kh., kand.tekhn.nauk, red.; TSYMBALIST, N.N., red.
izd-va; TURKINA, Ye.D., tekhn.red.

[Industrial dust] Promyshlennaya pyl'. Sverdlovsk, Gos.nauchno-
tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe
otd-nie, 1960. 240 p. (MIRA 13:8)

1. Institut fizicheskoy khimii AN SSSR (for Taubman). 2. Sverd-
lovskiy institut okhrany truda (for D'yakov). 3. Ural'skiy
filial AN SSSR (for Bakirov).
(Dust)

5.5300,5.1220

77941
SOV/65-60-3-14/19

AUTHORS: Taubmar, A. B., Konstantinova, V. V., Kryukova, A. S.

TITLE: Determination of the Critical Concentration of Micelle Formation of Surface-Active Substances

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, Nr 3, pp 61-66 (USSR) ⁵⁻

ABSTRACT: Determination of critical concentration (C_{cr}) of micelle formation of synthetic nonionic and anionic surfactants is carried out by titration of their aqueous solutions with a suitable dye solution. Two dyes, pinachanin chloride and rhodamine 6G extra, were used in these experiments, as well as the several surfactants shown in Table 1. The results of experiments are shown in Table 2 and compared with those obtained by conductometric and spectrophotometric methods. The suggested method can be used for any type of surfactants, provided a suitable dye is chosen, and no special equipment is required. The

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Determination of the Critical Concentration
of Micelle Formation of Surface-Active
Substances

77941

SOV/65-60-3-14/19

error of determination is $\pm 2\%$, and reproducibility is good. There are 2 tables; 2 figures; and 13 references, 10 U.S., 3 Soviet. The 5 recent U.S. references are: Gerstman, J. W., J. Phys. Chem., 61, 581 (1957); Mc Bain, M. E. L., Hutchinson E., Solubilization and Related Phenomena, New York, 29, (1955); Goddard, E. D., Jones, T. G., Res. correspond, 8, Nr 8, 41 (1955); Corrin, M. L., Harkins, W. D., J. Am. Chem. Soc., 69, 679, 683 (1947); Klevens, H. B., J. Phys. Coll. Chem., 51, 1143 (1947).

ASSOCIATION:

Institute of Physical Chemistry of the Academy of Sciences of the USSR (Institut fizicheskoy khimii AN SSSR)

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77941 SOV/65-60-3-14/19

Table 1. Surface-active Compounds.

No.	Formula	Molecular Weight
1	$\begin{array}{c} \text{O}(\text{C}_2\text{H}_4\text{O})_{n-1}\text{C}_2\text{H}_4\text{OH} \\ \\ \text{C}(\text{CH}_3)_2 \\ \\ \text{C}(\text{CH}_3)_2 \end{array} \quad n = 6$	515
2	$\begin{array}{c} \text{O}(\text{C}_2\text{H}_4\text{O})_{n-1}\text{C}_2\text{H}_4\text{OH} \quad n = 10 \\ \\ \text{C}_6\text{H}_{11} \end{array}$	647
3	$\text{C}_6\text{H}_{11}\text{OOC}-\text{CH}_2-\text{CH}-\text{COO}\cdot\text{C}_6\text{H}_{11}$ SO_3Na	444
4	$\begin{array}{c} \text{SO}_3\text{Na} \\ \\ \text{C}_6\text{H}_4 \quad \text{CH}_3 \\ \quad \\ \text{CH}_2-\text{C}-\text{CH}_2-\text{C}-\text{CH}_2 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	297

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(Table 1 continued)

77941 SOV/65-60-3-14/19

NR	FORMULAS	MOLECULAR WEIGHT
5	$\begin{array}{cccc} \text{CH}_3 & \text{CH}_3 & \text{CH}_3 & \text{CH}_3 \\ \text{CH}_3 \cdot \text{C} \cdot \text{CH}_3 \cdot \text{C} \cdot \text{C}_6\text{H}_5 \cdot \text{C} \cdot \text{CH}_3 \cdot \text{C} \cdot \text{CH}_3 \\ \text{CH}_3 & \text{CH}_3\text{SO}_3\text{NaCH}_3 & \text{CH}_3 & \end{array}$	405
6	$\begin{array}{c} \text{CH}_3 \cdot \\ \text{SO}_3\text{Na} \cdot \text{C}_6\text{H}_5 \cdot \text{C} \cdot (\text{CH}_3)_7 \cdot \text{CH}_3 \\ \text{CH}_3 \end{array}$	333
7	$\begin{array}{c} \text{SO}_3\text{Na} \cdot \text{C}_6\text{H}_5 \cdot (\text{CH}_3)_3 \cdot \text{CH} \cdot (\text{CH}_3)_2 \cdot \text{CH}_3 \\ (\text{CH}_3)_3 \\ \text{CH}_3 \end{array}$	333
8	$\begin{array}{c} \text{SO}_3\text{NaC}_6\text{H}_5 \cdot \text{CH}_3 \cdot \text{CH} \cdot \text{CH}_3 \cdot \text{CH} \cdot \text{CH}_3 \\ (\text{CH}_3)_3\text{CH}_3 \\ \text{CH}_3 \cdot \text{CH}_3 \cdot \text{CH}_3 \end{array}$	345

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77941 SOV/65-60-3-14/19

Table 2. The values of C_{cr} (moles/liter) measured by different methods.

(1)				
(2)	(3)		(4)	(7)
	(4)	(5)		
1	$1.8 \cdot 10^{-3}$	—	$1.4 \cdot 10^{-3}$	—
2	$4.9 \cdot 10^{-4}$	—	$3.8 \cdot 10^{-4}$	—
3	$5.4 \cdot 10^{-3}$ ($2.6 \cdot 10^{-3}$)	($2.6 \cdot 10^{-3}$)	$4.5 \cdot 10^{-3}$ ($2.7 \cdot 10^{-3}$)	$5.1 \cdot 10^{-3}$
4	$8.4 \cdot 10^{-3}$	$10.0 \cdot 10^{-3}$	—	$8.4 \cdot 10^{-3}$
5	$1.0 \cdot 10^{-3}$	$1.0 \cdot 10^{-3}$	—	$0.9 \cdot 10^{-3}$
6	$3.0 \cdot 10^{-3}$	$2.4 \cdot 10^{-3}$	—	$3.3 \cdot 10^{-3}$
7	$3.3 \cdot 10^{-3}$	$2.7 \cdot 10^{-3}$	—	$3.3 \cdot 10^{-3}$
8	$1.7 \cdot 10^{-3}$	$1.7 \cdot 10^{-3}$	—	$1.6 \cdot 10^{-3}$
	$1.1 \cdot 10^{-3}$	$1.1 \cdot 10^{-3}$	—	$1.1 \cdot 10^{-3}$

Key: (1) Surfactants; (2) colorimetric titration; (3) Pinacyanin chloride; (4) Rhodamine 6G-extra; (5) Spectrophotometry (pinacyanin chloride); (6) Electric conductivity at 40° ; (7) 6 + electrolytes.

Card 5/5

TAUBMAN, A.B.; YANOV, L.P.; MASLOVSKAYA, R.S.; GLAZUNOV, P.Ya.

Mechanism of gas formation in the radiolysis of organic compounds,
and its relation to their state of aggregation. Dokl. AN SSSR
134 no.2:397-399 8 '60. (MIRA 13:9)

1. Institut fizicheskoy khimii Akademii nauk SSSR. Predstavleno
akademikom P.A.Rebinderom.
(Radiation) (Gases)

S/020/60/135/005/035/043
B004/B075

AUTHORS: Taubman, A. B. and Nikitina, S. A.
TITLE: Micell Formation in Solutions of Surface-active Substances
PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 5,
pp. 1179-1182

TEXT: The authors discuss the problem 1) of the real existence of a critical concentration range of surface-active substances (SAS), in which micell formation takes place, and 2) of interpreting the critical points C_{cr} . The change of the solution properties of SAS was investigated. Methods and results are given in Table 1: Critical concentrations of micell formation: ✓

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Micell Formation in Solutions of Surface-active Substances S/020/60/135/005/035/043 B004/B075

SAS preparation:	Methods of determining C_{or}					
	nephelometric		titration with dye solution		determination of surface tension	
	$(C_{or})_1$	$(C_{or})_2$	$(C_{or})_1$	$(C_{or})_2$	$(C_{or})_1$	$(C_{or})_2$
1	0.0025	0.0049	0.0026	0.0050	0.0027	0.0052
2	--	--	0.014	0.031	--	--
3	--	--	0.00022	0.00045	--	--
4	0.0020	0.013	0.0024	0.012	0.0030	0.010
5	0.025	0.095	0.023	0.075	0.026	0.085

The authors examined: Preparation 1: Sodium salt of diethyl dihexyl ether of sulfosuccinic acid (aerosol OT); preparation 2: Sodium salt of dihexyl ether of sulfosuccinic acid (aerosol MA); preparation 3: Sodium salt of didecyl ether of sulfosuccinic acid; preparation 4: Dodecylamino acetate (amak 1120), and 5: preparation ДБ(ДВ), a polyoxy ethylene ester of di-tertiary butyl phenol. The nephelometric determination was carried out by means of an ФЭК-Н-57 (FEK-N-57) nephelometer. In preparation 4, titration proceeded by eosin, in the others by pinacyanol chloride. For aerosol OT Fig. 1 shows the optical density D, the static surface tension σ_s , and Card 2/4

Micell Formation in Solutions of Surface-active Substances S/020/60/135/005/035/043
B004/B075

the dynamic surface tension σ_d as a function of concentration C . Two critical points were found: $(C_{cr})_1$ and $(C_{cr})_2$. The following interpretation is given: In the initial range of concentration $0 > C > (C_{cr})_1$, an adsorption layer forms, the SAS being in a molecular (ionic) state. With $C = (C_{cr})_1$ the maximum saturation of the adsorption layer and a minimum of the static surface tension ($\sigma_s = \sigma_{min}$) are obtained. With a further increase of C the excess molecules (ions) associate to micells, until $C = (C_{cr})_2$ is attained. From these results the conclusion is drawn that the micell formation as well as adsorption show the same tendency of long-chain saponaceous SAS, to decrease their free surface energy on the phase boundary. The authors thank Academician P. A. Rebinder for discussions. There are 1 figure, 1 table, and 15 references: 4 Soviet, 7 US, 3 British, and 1 German.

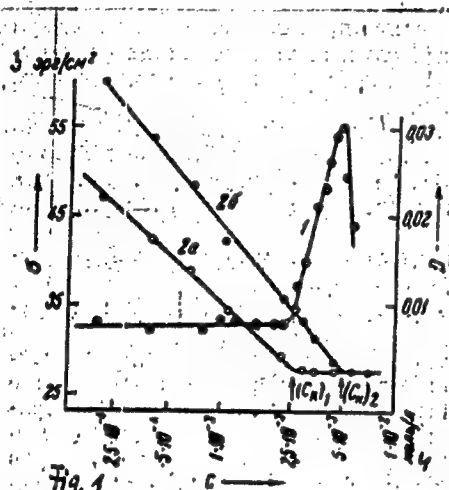
ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR
(Institute of Physical Chemistry of the Academy of Sciences
USSR)

Card 3/4

Micell Formation in Solutions of Surface-active Substances S/020/60/135/005/035/043
B004/B075

PRESENTED:: July 5, 1960, by P. A. Rebinder, Academician

SUBMITTED: June 24, 1960



Legend to Fig. 1: 1: $D = f(C)$;
2a: $\sigma_s = f(C)$; 2b: $\sigma_d = f(C)$;
3: erg/cm^2 ; 4: mole/l .

Card 4/4

NIKITINA, S.A.; KONSTANTINOVA, V.V.; ZAKIYEVA, S.Kh.; TAUBMAN, A.B.

Wetting capacity of surface-active substances and their rate of
adsorption from aqueous solutions. Zhur. prikl. khim. 34 no.12:2658-
2664 D '61. (MIRA 15:1)

(Surface-active agents) (Adsorption)

FILATOVA, M.A.; NIKITINA, S.A.; TAUBMAN, A.B.; REBINDER, P.A., akademik

Demulsifying effect of surface active agents and the structural and mechanical properties of their adsorption layers. Dokl. AN SSSR
140 no.4:874-876 0 '61. (MIRA 14:9)

1. Institut fizicheskoy khimii AN SSSR.
(Surface active agents) (Emulsions)

TAUBMAN, A.B.; KORETSKIY, A.F.

Dispersity and stability of emulsions stabilized by solid
emulsifiers. Dokl. AN SSSR 140 no.5:1128-1131 O '61.

(MIRA 15:2)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom
P.A.Rebinderom. (Emulsions)

S/844/62/000/000/106/129
D408/D307

AUTHORS: Taubman, A. B., Yanova, L. P., Maslovskaya, R. S. and
Glazunov, P. Ya.

TITLE: Mechanisms of gas formation processes during the radio-
lysis of polymers and low-molecular weight compounds

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
625-628

TEXT: The present work is a continuation of previous investigations
by the authors. Water and n-octane were irradiated with fast elec-
trons accelerated at 70⁰ - 750 kv; the doses were measured by the
ferrous sulfate method. For both materials the quantity of gas
evolved altered very slowly, and the temperature coefficients re-
mained practically constant, within wide intervals of temperature
both above and below their melting points. Since this phenomenon
was also detected in earlier work when polymers were irradiated,
the authors concluded that the change in the gas formation kinetics

Card 1/2

Mechanisms of gas ...

S/844/62/000/000/106/129
D408/D307

in the phase transition region is independent of the nature of the irradiated material and depends only on the conditions under which the gaseous degradation products are formed and liberated during the radiolysis. The results confirm the authors' previous conclusion that, up to the moment when new gas phase nuclei form, the radiolysis reaction is reversible. Thermomechanical curves drawn for polybutylmethacrylate specimens which had been previously irradiated with identical doses but at different temperatures indicated that destruction of the polymer chains depends not only on the direct radiation reaction, but also on internal stresses produced in the material as a consequence of the formation and delayed liberation of the gaseous radiolysis products. In some cases the formation of increased quantities of gas at higher temperatures does not aggravate the destruction of the polymer because the increased mobility of the chains enables the internal stresses to relax. There are 3 figures.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry, AS USSR)

Card 2/2

S/020/62/142/002/027/029
B101/B144

AUTHORS: Taubman, A. B., Tolstaya, S. N., Borodina, V. N., and
Mikhaylova, S. S.

TITLE: Adsorptive modification of fillers and pigments and
structure formation in polymer solutions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 2, 1962, 407-410

TEXT: The change in hydrophilic properties of mineral fillers due to oriented adsorption of surfactants was investigated. The experiments were conducted: (A) with 0.5% toluene solution of CKC-30 (SKS-30) rubber, filled with kaolin; (B) with 1.2% toluene solution of perchloro vinyl resin (PCVR), filled with TiO_2 (polymer-to-filler ratio = 1:80); (C) with 1.2% of dichloro ethane solution of PCVR, filled with TiO_2 (ratio 1:40). The change in static shear stress P_{H} was measured with a Veyler-Rebinder apparatus with addition of a surfactant (octadecyl amine (I) or stearic acid (II)), and the tensile strength of SKS-30 rubber samples, filled with activated kaolin (90 parts by weight of kaolin per 100 parts by weight of rubber) and vulcanized for 60 min at 140°C and 27 kg/cm^2 . For the ultraviolet-irradi-

Card 1/3

S/020/62/142/002/027/029
B101/B144

Adsorptive modification of ...

ated PCVR samples, "chalking" owing to the decomposition of the film and to the emergence of TiO_2 to the surface was measured photometrically by S. V. Yakubovich and V. A. Zubchuk, using a method of GIPI-4. The degree of adsorption of the surfactant by the filler was determined by photometric measurement of the methylene blue adsorption on the surface not occupied by surfactants. A maximum was found for $P_m = f(C_{\text{surfactant}})$ in all the experiments. For SKS-30 rubber filled with kaolin and activated with 2% I, P_m increased from 170 to 670 dynes/cm², while it dropped at a higher concentration of I. The maximum of tensile strength P_t lay at the same surfactant concentration which corresponds to the P_m maximum. A similar effect of I was observed with PCVR (P_m increased from 150 to 330 dynes/cm²), however, the optimum concentration of I was 0.2%. The "critical range" of occupation of the filler surface by an adsorbed surfactant, within which structuralization occurs, was very narrow. In the case of kaolin, the occupation was about 50%. In addition, the filler particles must be modified by irreversible chemisorption. II, which is reversibly adsorbed by kaolin, showed no structuralizing effect with rubber. When I and II were added simultaneously, the P_m in the maximum dropped from 670 to 280 dynes/cm², its position remaining unchanged at 2% I. For amphoteric Card 2/3

Adsorptive modification of ...

S/020/62/142/002/027/029
B101/B144

TiO₂, II was also effective. The optimum lay here at 0.080% II (350 dynes/cm²). The experimental series C showed the specific effect of the solvent. In dichloro ethane, a minimum of P_m occurred at 0.2%I.

The intensity of chalking was lowest at the P_m optimum where the linkage between pigment and polymer is highest. There are 2 figures and 9 references: 8 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: P. Rehbinder, Discuss. Farad. Soc., 18, 151 (1954).

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: August 15, 1961, by P. A. Rehbinder, Academician

SUBMITTED: August 15, 1961

Card 3/3

KUZ'KIN, Sergey Fedorovich; NEBERA, Vladimir Petrovich; TAUEMAN, A.B., ratsenzent; SUVOROVSKAYA, N.A., otv. red.; MAKRUSHINA, Ye.A., red.izd-va; BOLDYREVA, Z.A., tekhn. red.; LOMILINA, L.N., tekhn. red.

[Synthetic flocculants in dewatering processes] Sinteticheskie flokulyanty v protsessakh obezvozhivaniia. Moskva, Gosgortekhnizdat, 1963. 243 p. (MIRA 17:1)

TAUBMAN, A.B., doktor khimich. nauk, prof.; YANOVA, L.P., kand. khimich. nauk; GORLOVA, G.I., inzh.; MONASTYRSKAYA, M.S., kand. tekhn. nauk, dotsent; PAVLOV, S.A., doktor tekhn. nauk, prof.

Studying the effect of ionizing radiation on films made from carboxylate latex. Izv. vys. ucheb. zav.; tekhn. leg. prom. no.3:12-M; '63. (MIRA 16:7)

1. Akademiya nauk SSSR (for Taubman, Yanova). 2. Moskovskiy tekhnologicheskii institut legkoy promyshlennosti (for Gorlova, Monastyrskaya, Pavlov). Rekomendovana kafedroy tekhnologii iskusstvennoy kozhi i plenochnykh materialov Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Rubber, Synthetic) (Ionization)

NIKITINA, S.A.; TAUBMAN, A.B.; KULIGINA, N.V.; SPIRIDONOVA, V.A.

Structure formation in interphase adsorption layers of dissolved surface-active substances and the stability of emulsions and aqueous dispersions of polymers (latexes). Dokl. AN SSSR 149 no.4:905-908 Ap '63.
(MIRA 16:3)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom
P.A.Rebinderom.

(Surface-active agents) (Emulsions) (Adsorption)

LEVITSKIY, L.M.; NIKITINA, S.A.; TAUBMAN, A.B.

Formation of micelles in solutions of surface-active substances
and kinetic wetting. Dokl. AN SSSR 149 no.3:633-636 M_T '63.
(MIRA 16:4)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno
akademikom P.A. Rehinderom.
(Micelles) (Surface-active agents)

S/020/63/149/004/022/025
B106/B186

AUTHORS: Nikitina, S. A., Taubman, A. B., Kuligina, N. V.,
Spiridonova, V. A.

TITLE: Structuration in interphase adsorption layers of solutions of
surface-active substances and stability of emulsions and
aqueous dispersions of polymers (latex)

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 4, 1965, 905 - 908

TEXT: The values of the shear stress P_m of the adsorption layers in
aqueous ON-10 (OP-10) (alkyl phenol polyhydroxyethylene ether) solutions
during the period of their formation under static conditions were measured
along the water - xylene interface. Furthermore, the stability of con-
centrated emulsions of xylene in water and polymer dispersions (polystyrene
latex stabilized with OP-10 and pluronic (hydroxy ethylene and hydroxy
propylene block polymer)) was studied. The rate of increase in strength
of the protective emulsifier layers increases rapidly with the concentra-
tion of OP-10 solutions. Even in 5% solutions, however, maximum strength
($P_m = 0.25$ dyn/cm) is only reached after 25 hrs. When the same amount of
OP-10 was previously distributed between the two phases, high strength was
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Structuration in interphase...

S/020/63/149/004/022/025
B106/B186

reached in the first few minutes after the interface formed. To obtain small droplets (2 - 3 μ) the emulsion has to be shaken vigorously for 15 - 20 min. In a 5% solution of pluronic L64 the layer solidifies immediately even if the surface-active substance is dissolved in the aqueous phase only. The drop size is 2 - 3 μ also after short-time shaking.

the form of multilayer phase layers on the interface of the two liquid phases. These structures can also be seen visually. The above phenomena are caused by the hydrodynamic effect of the spontaneous surface turbulence and convection, which causes an unidirectional transition of the hydrocarbon phase into the aqueous phase in the form of an ultramicroemulsion (C. Sternling, L. Scriven, Am. Inst. Chem. Eng., 6, 514 (1959)). The results obtained by using OP-10 and pluronic 164 as emulsifiers for polystyrene latex agree well with the above data. These emulsifiers as well as Nekal'-MB (Nekal'-NB) and pluronic 184 make an almost complete polymerization of the monomer possible at comparatively high concentrations, but differ considerably in their stabilizing action. Maximum stability is reached when using OP-10 or pluronic as emulsifiers under conditions such

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Structuration in interphase...

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B106/B186

that solid supermolecular surface structures are able to form. High strength of the structured stabilizing layers is the principal condition for high stabilization of latex and concentrated emulsions; it is achieved when the emulsifiers are sufficiently soluble in water as well as in the non-aqueous phase. There are 1 figure and 1 table. The most important English-language reference is: A. Kaminski, J. S. McBain, Proc. Roy. Soc., London, 1958, 447 (1949).

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: September 26, 1962, by P. A. Robinder, Academician

SUBMITTED: September 12, 1962

Card 3/3

YAKHNIN, Ye.D.; TAUBMAN, A.B.

Adsorption modification of dispersed quartz, and structure
formation in solutions of rubber. Dokl. AN SSSR. 152 no.2:
382-385. 1963. (MIRA 16:11)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom
P.A. Rebinderom.

TITLE: Regularities of the radiolysis of polymethylmethacrylate and polybutylmethacrylate during irradiation in different physical states

SOURCE: Khimicheskiye svoystva i modifikatsiya polimerov (Chemical properties and the modification of polymers); sbornik statey. Moscow, Izd-vo Nauka, 1964, 183-188

TOPIC TAGS: polymethylmethacrylate, polybutylmethacrylate, polymer radiolysis, polymer molecular weight, polymer strength

ABSTRACT: A study was made of gas formation during irradiation within a temperature interval encompassing both transition points of polymethylmethacrylate (PMMA)

10¹⁷ ev/g-sec. Samples were first heated in a vacuum for 6 hrs. at 120C to remove

In addition, rupture and compression tests were made under loads of 8 kg/cm² (PMMA)
Card 1/3

L 19609-65

ACCESSION NR: AT4049857

and 4.4×10^{-2} (PRMA) and molecular weights were determined from the viscosity of the

residue as during thermal destruction. It was also determined that the residue
of 1.0×10^{-2} (PRMA) and 7.1×10^{-2} (PRMA) to 3.6×10^4 and 1.4×10^5 , respectively.

1. 1. 1. 1.

ASSOCIATION NO: 171040257

table and 5 figures.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry,
AN SSSR)

SUBMITTED: 19Nov62

ENCL: 00

SUB CODE: OC, MT

NO REF SOV: 007

OTHER: 012

Card 3/3

ACCESSION NR: AF401801.1

S/0303/64/000/001/0009/0012

AUTHORS: Taubman, A. B.; Bly*skosh, G. S.; Yanova, L. P.

TITLE: The structuration of carboxylated latexes

SOURCE: Lakokrasochnyye materialy*1 ikh primeneniye, no. 1, 1964, 9-12

TOPIC TAGS: latex, carboxylated latex, methacrylic acid, dispersion, gel formation, structuration, structural mechanical property, viscosity, shear stress, alkali, sodium hydroxide, ammonium hydroxide, film, paint, varnish

ABSTRACT: The effect of the pH value on the structuration of carboxylated latexes was investigated. The particular brands chosen were divinylstyrene latexes SKS-30-3 and SKS-65-1, stabilized by Nekal, which contained 23 and 34% respectively of dry matter and 3 and 1% methacrylic acid. These latexes were treated with various amounts of NaOH, KOH, and NH_4OH to bring about the desired pH range, care being taken to adjust the final volume to 1.5 of the original. The intrinsic viscosities and the ultimate shear stress values of the dispersions were measured at various intervals, and strength tests were performed on films from the various specimens. It was found that in latex SKS-30-3 treated with KOH or NaOH

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ACCESSION NR: AP4018041

the structure formation increased with the pH, reaching a maximum viscosity and P_m at pH 11. At this point the consistency resembled that of a rubber-like gel, which was not reversed by the addition of HCl. The structuration was a slow process, requiring 24 hours for completion. KOH proved more effective as a structurational agent than NaOH, which in turn was more effective than NH_4OH . Under similar conditions, in latex SKS-65-1 the NaOH gelation reached a maximum within 5-6 hours, rendering further viscosity determinations impossible, and here ammonia proved ineffective. Strength tests conducted on films obtained from the specimens at various stages of structuration provided values which paralleled those of viscosity and shear stress. Thanks are given to A. B. Peyzner for the synthesis of the latexes. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: CH

NO REF SOV: 009

OTHER: 001

Card 2/2

GORLOVA, G.I.; MONASTYRSKAYA, M.S.; TAUBMAN, A.B.; YANOVA, L.P.

Filled films made from carboxylate latex. Kauch. i rez. 23
no.427-9 Ap'64 (MIRA 17:7)

1. Moskovskiy tekhnologicheskii institut legkoy promyshlennosti.

ACCESSION NR: AP4011313

S/0069/64/026/001/0126/0132

AUTHORS: Yakhnin, Ye. D.; Taubman, A. B.

TITLE: Adsorption modification of quartz in connection with the structuring effect of fillers in polymer systems.

SOURCE: Kolloidnyy zhurnal, v. 26, no. 1, 1964, 126-132

TOPIC TAGS: quartz, rubber filler, surface active modified quartz, adsorption modified quartz, filler, quartz suspension, reinforcing capacity

ABSTRACT: The isotherms of adsorption of surface active compounds (octylamine and octadecylamine) from xylene onto quartz were constructed. The relation between the degree of adsorption modification of the dispersed quartz and the structuration of its suspensions in xylene and xylene solutions of SKS-30 rubber was investigated. Binding of the amines by quartz from the xylene solutions proceeds in two consecutive stages: first by irreversible chemical adsorption, and then by reversible physical adsorption. The maximum strength occurs in these systems when there is incomplete coverage and chemical

Card 1/2

ACCESSION NR: AP4011313

binding of the modifier on the filler surface. This explains the appearance of the lyophobic-lyophilic adsorptive macromosaic pattern on the solid phase surface. The reinforcing capacity of fillers in actual polymeric materials may be estimated from model systems. Orig. art. has: 5 Figures.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Moskva
(Institute of Physical Chemistry AN SSSR)

SUBMITTED: 02Jul63

DATE AQ: 14Feb64

ENCL: 00

SUB CODE: MA, PH

NR REF SOV: 006

OTHER: 002

Card 2/2

TAUBMAN, A.P.; YAKHININ, Ye.D.

Incomplete thixotropy of condensation-coagulation structures
arising in finely divided quartz dispersions. Koll. zhur. 26
no.5:653-654 S-O '64. (MIRA 17:10)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

ACCESSION NR: AP4047948

S/0020/64/158/005/1155/1158

AUTHOR: Maslovskaya, R. S.; Taubman, A. B.; Yanova, I. P.

TITLE: Diffusion permeability of polymers upon radiative destruction in different physical states

SOURCE: AN SSSR. Doklady*, v. 158, no. 5, 1964, 1155-1158

TOPIC TAGS: diffusion permeability. irradiated polymer. irradiated polymethyl-

ABSTRACT: The coefficient of diffusion of oxygen through (P) polymers irradiated of polymethylmethacrylate (PMMA) and polybutylmethacrylate (PBMA) irradiated

showed marked discontinuities in the regions of the glass temperature of the polymers. The diffusion coefficient of oxygen through PMMA and PBMA films of thicknesses 0.5 mm and 1 mm and PBMA irradiated with 0.5 Mrad oxygen and irradiated films were

Card 1/3

L 23531-65

ACCESSION NR AF4047048

and a equation

Cord 2/3

L 23531-65
ACCESSION NR: AP4047948

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry Academy of Sciences SSSR)

SUBMITTED: 25Apr64

ENCL. 00

SUB CODE: OC

NO REF SOV: 009

OTHER: 007

Card 3/3

L 25263-65

ACCESSION NR: AP500 1922

[illegible]

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Physical chemistry institute AN SSSR); Vsesoyuznyy nauchno-issledovatel'skiy institut plonochnikh materialov i lakostroyeniya (All-union film materials and synthetic leather scientific research institute).

Card 2/2

0 100 200 300 400 500 600 700 800 900 1000

polymerization of styrene initiated by the latex emulsifier sodiumstyrene

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using potassium persulfate (0.04% of polymer weight) as the reaction initiator. The low-

L 41058-65

ACCESSION NR: AP5007141

at room temperature, 1-hr. centrifugation at 4000 rpm and determining the dry residue
Tensile strength 117.2 kg/cm^2 with a relative

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, OC

NO REF SOV: 011

OTHER: 006

Card 2/2

TAUEMAN, A.B.; NIKITINA, S.A.; FRIGORODOV, V.N.

Role of quasi-spontaneous emulsification in the process of
stabilization of emulsions. Koll. zhur. 27 no.2:291-292
Mr-Apr '65. (MIRA 18:6)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

L 52212-65

ACCESSION NR: AP5014530

2

found that the reinforcing action of fillers can be improved by using surface-

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Moscow (Institute of Physical and Chemical Sciences, USSR Academy of Sciences)

SUBMITTED: 12Sep63

ENCL: 00

SUB CODE: MT

NO REF SOV: 010

OTHER: 002

C

qph
Card 2/2

TAUBMAN, A.B.

"Course in colloid chemistry" by S.S.Volutskii. Zhur.fiz.khim. 39
no.7:1800-1801 J1 '65. (MIRA 18:8)

PRIGORODOV, V.N.; NIKITINA, S.A.; TAUBMAN, A.B.

Stability of concentrated emulsions stabilized by nonionicogenic
emulsifiers. Koll. zhur. 27 no.6:859-863 N.S. '65.

(MIRA 18:12)

I. Institut fizicheskoy khimii AN SSSR, Moskva. Submitted
July 18, 1964.

TOLSTAYA, S.N.; BORODINA, V.N.; TAURMAN, A.B.

Adsorption activation and the reinforcing action of mineral
fillers in polymer systems. Koll.zhur. 27 no.3:446-452 My-Je
1965. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR, Moskva. Submitted
Sept. 12, 1963.

L 40158-66 ENI(m)/EMP(j) IJP(c) RM

ACC NR: AP6019446

(A)

SOURCE CODE: UR/0303/66/000/003/0010/0013

AUTHOR: Taubman, A. B.; Blyskosh, G. S.; Yanova, L. P.

ORG: none

TITLE: Mechanical and chemical modification of the surface of pigments and fillers
by grafting of polymersSOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 3, 1966, 10-13TOPIC TAGS: graft polymer, calcium carbonate, polystyrene, styrene, barium sulfate
grafting, polymerization, pigment, filler, chemical dispersion,
monomer, polymer

ABSTRACT: A study has been made of the mechanical and chemical grafting of polystyrene to the surface of calcium carbonate, ferric oxide, and barium sulfate by dispersing them in a vibratory mill in aqueous styrene emulsions. It has been shown that the grafting effect is increased by the presence of small amounts of water in styrene; the rate of conversion of the monomer into a polymer in styrene emulsions and in anhydrous styrene is about the same. It has been established that the activating effect of water is related to its facilitating the process of dispersion, which leads to an intensified growth of the activated surface. A study of the strength properties of filled varnish films has shown that the grafting of polystyrene while modifying the surface of the pigment, renders it hydrophobic, thus improving the quality of the films. Orig. art. has: 6 figures and 1 table. [AM]

SUB CODE: 07/11/ SUBM DATE: none/ ORIG REF: 010/ OTH REF: 001

Card 1/1

UDC: 667.633.263.3

ACC NR: AP7006039

SOURCE CODE: UR/0063/66/011/004/0387/0391

TAUBMAN, A. B., Doctor of Chemical Sciences, NIKITINA, S. A., Candidate of Chemical Sciences, and TOLSTAYA, S. N., Candidate of Chemical Sciences

ORG: none

"Surface-active Agents in the Physical Chemistry and Technology of Polymers"

Moscow, Zhurnal Vsesoyuznogo Khimicheskogo Obschestva, Vol 11, No 4, 1966, pp 387-391

Abstract: With the exception of carbon black -- a highly hydrophobic and highly dispersed and therefore effective polymer filler, most other mineral fillers, including pigments, are hydrophilic and of low activity. The oriented adsorption of surface-active agents (SAA) on particle surfaces, lyophilizing it with respect to the polymeric medium (the polymer or its solution in an organic solvent), peptizes the filler, intensifies the molecular interaction on the particle-medium interface, and alters the strength properties arising in the filling of coagulation structures. This kind of modification with the purpose of facilitating the distribution of filler particles in the polymer (rubbers), improving the wear of pigments, and increasing the stability of paints is carried out with the aid of long-chain amines, fatty acids, their salts, and many other SAA. The high emulsifying capacity of long-chain SAA homologs -- the soaps of natural fatty acids and synthetic soaplike compounds -- affords their extensive utilization in the polymerization of latexes. For this purpose, anion-active and non-ionogenic soaps are chiefly used. Orig. art. has: 1 figure. [JPRS: 38,970]

Card 1/2

UDC: 661.185.1 + 541.6

09270828

ACC NR: AP7006039

TOPIC TAGS: surface active agent, pigment

SUB CODE: 11 / SUM DATE: none / ORIG REF: 051 / OTH REF: 020

Card 2/2

USSR .

Determination of the limit of permissible concentration of hexachloran in a water reservoir. Yu. A. Zhakov and A. N.

Taubman, 14-25. *Izvestiya Sverdlovsk. Gos. Univ.* Obshchestv. Nauch. Ser. 1953, 14-15; Referat. Zhur., Khim. 1954, No. 20027. —The smell of hexachloran used as insecticide begins to be perceptible in cold water at a concn. of 0.04 mg./l. and in warm water (20°) at 0.01 mg./l. The odor attains its limiting intensity at a concn. of 0.06 and 0.03 mg./l., resp. In estuaries, of up to 2.5 mg./l. hexachloran has no effect on the general sanitary conditions of the reservoir. In estuaries, of up to 50 mg./l. it does not affect the O level and the development of water microflora, up to 12.5 mg./l. It does not affect nitrification processes, and at concns. of up to 2.5 mg./l. it does not affect the B.O.D. Poisoning rats with hexachloran over a period of 4 months with doses of 50 mg./kg. of live wt. caused no noticeable changes in the general condition, wt., and blood of the animals. Thus, the admissible limit of hexachloran concn. in water reservoirs is detd. by its odor and should be accepted as 0.01 mg./l.

M. Hlozhi

(1)

TAUBMAN, A.V.; NIKITINA, S.A.

Formation of micelles in solutions of surface active agents.
Dokl. AN SSSR 135 no.5:1179-1182 D '60. (MIRA 19:12)

1. Institut fizicheskoy AN SSSR. Predstavleno akademikom P.A.
Reginderom.
(Micelles) (Surface active agents)

TAUBMAN, S. I.

PA 69T64

USSR/ Mathematics - Bibliography

Mar/Apr 1948

"Mathematical Literature Published in 1946 and 1947,"
S. I. Taubman, 4 pp

"Uspekhi Matemat Nauk" Vol III, No 2 (24)

A list of titles of books on mathematics published in
USSR, in 1946 and 1947 with numbers and prices.

FDB

69T64

PISARENKO, Aleksandr Pavlovich, prof.; POSPELOVA, Kseniya Aleksandrovna, dots.; YAKOVLEV, Aleksandr Georgiyevich, dots.; VOYUTSKIY, S.S., prof., retsenzent; NAZAROV, V.I., prof., retsenzent; TAUEMAN, S.S., prof., retsenzent; BARAMBOYM, N.K., prof., retsenzent; STUKOVNIN, I.D., red. izd-va; YEZHOVA, L.L., tekhn. red.

[Course in colloid chemistry] Kurs kolloidnoi khimii. Moskva, Gos.izd-vo "Vysshaya shkola," 1961. 241 p. (MIRA 14:12)
(Colloids)

REMENNYI, L., inzh.; TAUBMAN, Ye., inzh.

Automation of grain drying processes in the VTI-15 grain dryer.
Muk.-elev.prom. 25 no.7:6-7 J1 '59. (MIRA 12:11)

1. Odesskiy proyektno-konstruktorskiy institut Pishcheprom.
(Grain--Drying)

TAUBMAN, Ye. I.

AUTHOR: Taubman, Ye.I., Engineer 91-58-7-8/27

TITLE: Exchange of Experience (Obmen opytom). The Choice of Impulse for the Load Controller of a Drum Ball Mill (Vybor impul'sa k regul'yatoru zagruzki sharovoy barabannoy mel'nitsy).

PERIODICAL: ⁶⁻ Energetik, 1958, Nr 7, pp 21-22 (USSR)

ABSTRACT: The article explains the basic diagram of a double impulse load controller commonly used either with TsKTI electromechanical or VTI electronic automation. The author distinguishes two types of mills: with and without clear acceleration characteristics. Figure 2 shows the measuring spots and acceleration characteristics for mills of "Garding" type taken at the "Novosibirskenergo" electric power plant. The correct choice of the hydraulic resistance as impulse can improve the quality of load control. On the basis of research made with the "Sh-10" type

Card 1/2